

DAFTAR PUSTAKA

- Abbas HD. 2017. Evaluation of Serum Metalloproteinase-9 (MMP-9) in Iraqi men with urinary tract infection. *International Journal of Bioassays* 6(12): 1558-5561
- Ali O, Shouman M, Emara I, Abd-Allah R, 2015. Study of MMP-2 and MMP-9 in Type 2 Diabetic Patients with and without Microalbuminuria. *International Journal of Pharmaceutical Applications* 1(6):1-9
- Azeem M, Iqbal A, Butt N, Randhawa FA, Malik U, 2017. Frequency of Type-2 diabetes mellitus in Nephropathic patients and comparison of mean magnesium levels in Nephropathic patients with and without Type-2 diabetes mellitus. *Pak J Med Sci* 33(5): 1254-1259.
- American Diabetes Association, 2018. Standards of Medical Care in Diabetes—2017 Abridged for Primary Care Providers. *Diabetes Care*, 40 (Suppl. 1): S1–S138.
- Anzaldo SH, Brglez V, Hemmeryckx B, Leung D, Filep JG, Vance JC, Vance DE, Kassiri Z, Roger H, Lijnen RH, Lambeau G, 2016. Novel role for matrix metalloproteinase-9 in modulation of cholesterol metabolism. *J Am Heart Assoc.* 5:e004228
- Barbagallo M, Dominguez LJ, Galioto A, Pineo A, Ferlisi A, Tranchina E, Bervedere M, Putignano E, Costanza G.,2003. “Role of magnesium in insulin action, diabetes and cardio-metabolic syndrome X”. *Molecular Aspects Medicine*, 24: 39–52.
- Bateman Sw, 2016. A quick reference on magnesium. *Veterinary Clinics of North America: Small Animal Practice*, 47 (2):235-239
- Berg G, Miksztowicz V, 2015. Metalloproteinases in the pathogenesis and progression of metabolic syndrome: potential targets for improved outcomes Metalloproteinases In *Medicine* :2 51–59
- Bherwani S, Jibhkate SB, Saumva AS, Patel SK, Singh R, 2016. Hypomagnesemia: a modifiable risk factor of diabetic nephropathy. *Hormone molecular Biology and clinical investigation* 29(3):79-84.
- Blaine J, Chonchol M, Levi M, 2015. Renal control of calcium, phosphate, and magnesium homeostasis. *Clinical Journal of the American Society of Nephrology*, 10(7):1257-1272
- Brownlee M, 2005. The Pathobiology of diabetic complications a unifying mechanism. *Diabetes*, 54: 1615-1624.
- Brownlee M, 2001. Biochemistry and molecular cell biology of diabetic complications. *Nature*, 414: 23-54
- Candlish DJ, 2000. Minerals. *Journal of the American College of Nutrition*, 17: 86–310
- Cheng Z, Limbu M, Wang Z, Liu J, Liu L, Zhang X, 2017. MMP-2 and 9 in Chronic Kidney. *Int. J. Mol. Sci.*18: 776
- Cooper ME, 2001. Interaction of metabolic and haemodynamic factors in mediating experimental diabetic nephropathy. *Diabetologia* 44, 1957–1972

- Dasgupta A, Sarma D, Saikia UK, 2012. Hypomagnesemia in type 2 diabetes mellitus. *Indian Journal of Endocrinology and Metabolism*,16:6.
- De Baaij JHF, Hoenderop JGJ& Bindels RJM, 2015. Magnesium in man: Implication for health and Disease. *Physiology Review*, 95: 1-46.
- De Baaij, Hoenderop JG, Bindels RJ, 2012. Regulation of magnesium balance: lessons learned from human genetic disease. *Clin Kidney J*, 5: i15–i24
- De Marchi S, Cecchin E, Basile A, Bertotti A, Nardini R, Bartoli E., 1993. Renal tubular dysfunction in chronic alcohol abuse-effect of abstinence. *The New England Journal of Medicine* 329 (26): 1927-1934.
- Derosa G, Angelo D, Tinelli C, 2007. Evaluation of metalloproteinase 2 and 9 levels and their inhibitors in diabetic and healthy subjects. *Diabetes & Metabolism* 33: 129–134
- Derosa G, Maffioli P, D'Angelo A, Salvadeo SA, Ferrari I, Fogari E, Gravina A, Mereu R, Palumbo I, Randazzo S, Cicero A. 2009. Evaluation of metalloproteinase 2 and 9 levels and their inhibitors in combined dyslipidemia. *Clin Invest Med* 32 (2): E124-E132.
- Diaz AG, Villaseñor LP, Escatell FG, Sierra JA, 2016. Oxidative Stress in Diabetic Nephropathy with Early Chronic Kidney Disease. *Journal of Diabetes Research* 1-2
- Goldstein SL, 2010. Urinary kidney injury biomarkers and urine creatinine normalization: a false premise or not ?. *Kidney International*, 78, 433 – 435.
- Gommers LMM, Hoenderop JGJ, Bindels RJM & De Baaij JHF, 2016. Hypomagnesemia in type 2 diabetes: A vicious circle?. *Diabetes*, 65: 3-13.
- Gong Y, Venkata UDC, Oh WK, 2014. Roles of Matrix Metalloproteinases and Their Natural Inhibitors in Prostate Cancer Progression. *Cancers*,6:, 1298-1327
- Grober U, Schmidt J, Kisters K.,2015. Magnesium in prevention and therapy. *Nutrients*, 7: 8199-8226.
- Hamdy FC, Fadlon EC, Cottam D, Lawry J, Thurell W, Silcocks PB. 1994. Matrix metalloproteinase 9 expression in primary human prostatic adenocarcinoma and benign prostatic hyperplasia. *Br. J. Cancer*, 69: 177-182
- Hans CP, Sialy R& Bansal DD, 2002. Magnesium deficiency and diabetes mellitus. *Current Science*, 83(12): 156-1462.
- Hasegawa G, Nakano K, Kondo M, 2005. Role of TNF and IL-1 in the development of diabetic nephropathy. *Nefrologia*, 15: 1–4
- Hertting O ,Chromek M, Tullus K, Jaremko G, Khalil A, Li YH, Brauner A. 2003. Matrix metalloproteinase-9 and tissue inhibitor of metalloproteinase-1 in acute pyelonephritis and renal scarring. *Pediatr Res*,53(4):698-705.
- Hou J, Renigunta A, Gomes AS, 2009. Claudin-16 and claudin-19 interaction is required for their assembly into tight junctions and for renal reabsorption of magnesium. *Proc Natl Acad Sci USA*,106: 15350–15355

- Huang W, Gallois Y, Bouby N, 2001. Genetically increased angiotensin I-converting enzyme level and renal complications in the diabetic mouse. *Proc Natl Acad Sci U S A*, 98(23):13330–13334
- Huijgen HJ, Soesan M, Sanders R, Mairuhu WM, Kesecioglu J, Sanders GT. ,2000. “Magnesium levels in critically ill patients”. *American Journal Clinical Pathology*, 114: 688-695.
- International Diabetes Federation. 2015. IDF Diabetes Atlas. 7th edition.
- Kidney Disease: Improving Global Outcomes (KDIGO), 2013. KDIGO 2012 clinical practice guideline for the evaluation and management of chronic kidney disease. *Kidney Int Suppl.*,3:1-150.
- Keiboom BCT, Jong JCK, Eijgelsheim M, Franco OH, Kuipers EJ, Hofman A, Zietse R, Stricker BH, Hoorn EJ., 2015. “Proton pump inhibitors and hypomagnesemia in the general population: a population-based cohort study”. *American Journal Kidney Disease*. Available at: <http://dx.doi.org/10.1053/j.ajkd.2015.05.012>. [Accessed: 23 Oktober 2017].
- Lazarus B, Chen Y, Wilson FP, Sang Y, Chang AR, Coresh J, 2016. Proton Pump Inhibitor Use and Risk of Chronic Kidney Disease *JAMA Intern Med*. 176(2): 238–246.
- Laecke SV, Nagler EV, Verbeke F, Biesen WV, Vanholder R, 2013. Hypomagnesemia and the Risk of Death and GFR Decline in Chronic Laecke SV, Biesen WV, Verbeke F, De Bacquer D, Peeters P, Vanholder R. (2009). “Posttransplantation hypomagnesemia and its relation with immunosuppression as predictors of new-onset diabetes after transplantation”. *American Journal of Transplantation*, 9: 2140-2149.
- Lenz O, Elliot SJ, Stetler-Stevenson WG, 2000. Matrix metalloproteinases in renal development and disease. *JASN* ;11(3):574–81.
- Lim, 2014. Diabetic nephropathy – complications and treatment. *International Journal of Nephrology and Renovascular Disease* 7: 361–381
- Lim AK& Tesch GH, 2012. Inflammation in diabetic nephropathy. *Mediators Inflamm*. (1):146-154
- Mahendran K, Sethupathy S, Perumal K, Inmozhi R, Santha K, 2015. Plasma and urinary matrix metalloproteinase-9 as a marker for detection of nephropathy in type 2 diabetic patients. *International Journal of Medical Science and Public Health* 4(10):1409-1412
- Makunts T, Cohen IV, Awdishu L, Abagyan R, 2019. Analysis of postmarketing safety data for proton-pump inhibitors reveals increased propensity for renal injury, electrolyte abnormalities, and nephrolithiasis. *Sci Rep*. 9: 2282.
- Mascarenhas R, Vashistha H& Kumbala D, 2015. Magnesium Disorders. Hospital Medical Clinic. Available from: <http://dx.doi.org/10.1016/j.ehmc.2015.06.006>. [Accessed on: 10 Januari 2017].
- National Institute on Alcohol Abuse and Alcoholism (NIAAA), 2015. “Dietary guidelines for americans 2015-2020”. National Institutes of Health. Available at: <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>. [Accessed: 23 Oktober 2017].

- Osterby R, Gall MA, Schmitz A, Nielsen FS, Nyberg G, Parving HH, 1993. Glomerular structure and function in proteinuric type 2 (non-insulin-dependent) diabetic patients. *Diabetologia* 1993;36:1064–70.
- Osterby R, Tapia J, Nyberg G, Tencer J, Willner J, Rippe B, Torffvit O, 2001. Renal structures in type 2 diabetic patients with elevated albumin excretion rate. *APMIS*;109:751–61.
- Perkumpulan Endokrinologi Indonesia, 2015. Konsensus pengelolaan dan pencegahan diabetes melitus tipe 2 di Indonesia. Jakarta: Toko Teknologi.
- Pham PC, Pham PM, Pham PA, Pham SV. 2005. Lower serum magnesium levels are associated with more rapid decline of renal function in patients with diabetes mellitus type 2. *Clin Nephrol*, 63(6): 429-36.
- Pham PC, Pham PM, Pham PT, Pham SV, 2009. The link between lower serum magnesium and kidney function in patients with diabetes mellitus type 2 deserves a closer look. *Clin Nephrol*, 71(4):375-9.
- Poncelas AD, Barcelo MA, Saez M, de Tuero GC, 2018. Duration and dosing of Proton Pump Inhibitors associated with high incidence of chronic kidney disease in population-based cohort. *PLoS One.*, 13(10): e0204231.
- Rayssiguier Y, Libako P, Nowacki W, Rock E, 2010. Magnesium deficiency and metabolic syndrome: stress and inflammation may reflect calcium activation. *Magnesium Research*, 23:73-80.
- Rios FJ, Montezano AC, Antunes TT, Touyz RM.,2017. Chapter 29 Magnesium, Vascular Function and Hypertension. *Available at*: <http://dx.doi.org/10.1016/B978-0-12-802168-2.00029-4>. [Accessed: 3 September 2017].
- Rodriguez-Moran M, Mendia LES, Galvan GZ, Guerrero-Romero F.,2011. The role of magnesium in type 2 diabetes: A brief based-clinical review. *Magnesium Research*, 24 (4): 156-62.
- Rogowicz A, Zozulińska D, Wierusz-Wysocka B, 2007. Role of matrix metalloproteinases in the development of vascular complications of diabetes mellitus – clinical implications. *Pol Arch Med Wewn*, 117 (3): 103-108
- Romani A, 2007. Regulation of magnesium homeostasis and transport in mammalian cells. *Arch Biochem Biophys*, 458: 90–102
- Rysz J, Banach M, Stolarek R, Pasnik J, Rysz A, 2007. Serum matrix metalloproteinases MMP-2 and MMP-9 and metalloproteinase tissue inhibitors TIMP-1 and TIMP-2 in diabetic nephropathy. *J NEPHROL*, 20: 444-452
- Sakaguchi Y, Shoji T, Hayashi T, Suzuki A, Shimizu M, Mitsumoto K & Kawabata H, 2012. Hypomagnesemia in type 2 diabetic nephropathy: a novel predictor of end-stage renal disease. *Diabetes Care*, 35:1591-1597.
- Schiller LR, Pardi DS, Sellin HJ, 2017. Chronic diarrhea: Diagnosis and management-perspective in clinical gastroenterology and hepatology. *Clinical Gastroenterology and Hepatology*, 15:182-193

- Schmid H, Boucherot A, Yasuda Y, 2006. Modular activation of nuclear factor-kappaB transcriptional programs in human diabetic nephropathy. *Diabetes*, 55(11):2993–3003
- Schreiner GF & Kohan D. E, 2000. Regulation of renal transport processes and hemodynamics by macrophages and lymphocytes. *Am. J. Physiol.* 258, F761–F767
- Shet N, Shetty S, Rao A, 2014. To Study Serum Mmp-9 Levels In Early Diabetic Nephropathy. *International Journal of Pharmaceutical Science Invention ISSN (Online): 2319 – 6718*
- Siddiqui K, Nahla Bawazeer N, Joy S, 2014. Variation in macro and trace elements in progression of type 2 diabetes. *The Scientific World Journal* 3:1-4
- Silva AP, Fragoso A, Silva C, Tavares N, Santos N, Martins H, 2014. Magnesium and Mortality in Patients with Diabetes and Early Chronic Kidney Disease. *J Diabetes Metab*, 5:3
- Skinner JL, Riley SC, Gebbie AE, Glasier AF, Critchley OD, 1999. Regulation of matrix metalloproteinase-9 in endometrium during the menstrual cycle and following administration of intrauterine levonorgestrel. *Human Reproduction* 14 (3); 793–799
- Steffes MW, Osterby R, Chavers B, Mauer SM, 1989. Mesangial expansion as a central mechanism for loss of kidney function in diabetic patients. *Diabetes*; 38:1077–81
- Tarigan TJE, Marbun MBH, Harimurti K, 2015. Korelasi kadar magnesium serum dengan albuminuria pada pasien diabetes mellitus tipe 2. *e Journal Kedokteran Indonesia*. 3(2): 115-119.
- Tashiro K, Koyanagi I, Ohara I, Ito T, Saitoh A, Horikoshi S, Tomino Y, 2004. Levels of Urinary Matrix Metalloproteinase-9 (MMP-9) and Renal Injuries in Patients With Type 2 Diabetic Nephropathy. *Journal of Clinical Laboratory Analysis* 18:206–210
- Tjokroprawiro A, 2008. Astaxanthin-oxidative stress-diabetes mellitus. From Basics to Clinics and from General to Specific. *Folia Medica Indonesiana Vol. 44*: 293-299
- Wahid A, Verma GC, Meena CP, Pathan AR, 2017. Study of serum magnesium level in patients with type 2 diabetes mellitus and it's corellation glycosylated hemoglobin and diabetic complications. *Int J Adv Med*; 4(2): 311-316.
- Yabluchanskiy A, Ma Y, Iyer RP, Hall ME, Lindsey ML. 2013. Matrix Metalloproteinase-9: Many Shades of Function in Cardiovascular Disease *Physiology* 28: 391–403.
- Yossef Hm, Ghanem NS, Al-Jarhi NM, Shaker OG, 2017. Relation of serum magnesium level to microvascular complications and the components of metabolic syndrome in patients with type 2 diabetes mellitus. *The Egyptian Journal of Internal Medicine*, 29:100–104
- Woessner JF Jr., 1991. Matrix metalloproteinases and their inhibitors in connective tissue remodeling. *FASEB J* ;5:2145–54.

World Health Organization, 2013. A global brief on hypertension-Silent killer, global public health crisis. <http://www.who.int/nmh/publications/phc2012/en/index.html>. Diakses pada tanggal 01 April 2018

World Health Organization, 2017. Global report on diabetes..<http://who.int/diabetes/global-report/en/>.Diakses pada tanggal 01 April 2018.

Zhao H, Dong Y, Tian X, Tan TK, Liu Z, Zhao Y, 2013. Matrix metalloproteinases contribute to kidney fibrosis in chronic kidney diseases. *World J Nephrol* 2(3): 84-89.